

## REMARKS

### *The Present Invention*

The present invention provides a cosmetic composition with improved moisturizing properties, a method of enhancing moisture retention in the skin from the epidermis, a method of reducing the rate of escape of water from the epidermis, and a method of improving the after-feel of a cosmetic composition when the composition is applied to the skin. In accordance with the present invention, it has been found that combining urea and coenzyme Q10 in a cosmetic composition results in a synergistic benefit of improved moisturizing properties, after-feel (e.g., non-greasiness, rapid absorption, and the like) and/or visual appeal. In some embodiments, urea and coenzyme Q10 are combined in a ratio of urea to coenzyme Q10 of from about 1:5 to about 20:1 (wt./wt.).

### *The Pending Claims*

Claims 1-45 are pending currently. Claims 1-42 are directed to a cosmetic composition comprising urea and coenzyme Q10. Claim 43 is drawn to a method of enhancing moisture retention in the skin from the epidermis. Claim 44 is directed to a method of reducing the rate of escape of water from the epidermis. Claim 45 is drawn to a method of improving the after-feel of a cosmetic composition when the composition is applied to the skin. Reconsideration of the pending claims is respectfully requested.

### *Summary of the Office Action*

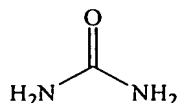
The Office Action has rejected claims 1-42 under 35 U.S.C. § 103(a) as allegedly obvious over Riley et al. (U.S. Patent No. 6,468,564) in combination with Fänger et al. (U.S. Patent No. 6,153,204). In addition, claims 43-45 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Riley et al. in combination with Fänger et al. and further in view of Hoppe et al. (U.S. Patent No. 5,912,272) and Raab (Uses of Urea in Cosmetology, 1990).

### *Discussion of the Obviousness Rejection*

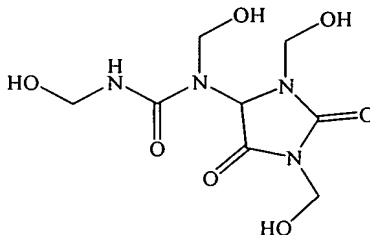
The obviousness rejections are respectfully traversed because the cited references (alone or in combination) do not disclose or reasonably suggest the present invention as recited in the pending claims.

According to the Office Action, Riley et al. discloses skin care compositions for aging or drying skin. However, Riley et al. does not disclose compositions that contain both urea and coenzyme Q10. The Examiner points to Riley et al.'s disclosure of a composition

containing *diazolidinyl urea* and coenzyme Q10. Applicants submit that diazolidinyl urea and urea are not the same compound. Diazolidinyl urea as disclosed by Riley et al. and urea as used in the present invention differ both structurally and functionally. It is well known in the art that urea has the structure



and primarily is used for skin conditioning and its humectant properties (i.e., to attract and increase the water content in the upper layers of skin). In contrast, diazolidinyl urea has the structure



and is used to maintain the integrity of cosmetic products by acting as a preservative to prevent or retard microbial growth and/or contamination. As evidence that the structure and functions of urea compared to diazolidinyl urea are well known in the art, copies from The Merck Index-An Encyclopedia of Chemicals, Drugs, and Botanicals, 13<sup>th</sup> Ed., (2001), pages 529 and 1758 and information from the Cosmetic, Toiletry, and Fragrance Association's website (<http://www.ctfa-online.org/>) are enclosed herewith.

The Examiner alleges that Riley et al. does not disclose the specific weight ratio of urea and coenzyme Q10 as recited in the pending claims. Fänger et al. is directed to a cosmetic preparation exhibiting a reduced feeling of stickiness. As pointed out in the Office Action, Example 3 of Fänger et al. provides a composition containing 10.00 wt.% urea and generically mentions "perfume, preservatives, dyes, antioxidants etc." Ubiquinone (coenzyme Q10) is among the dozens of antioxidants listed in column 7 of Fänger et al. However, Fänger et al. does not teach or suggest combining urea and coenzyme Q10 *in any ratio* whatsoever, not to mention a ratio of from about 6:1 to about 10:1 (wt./wt.), as recited in the claims. Fänger does not appreciate any special benefit of selecting coenzyme Q10 at all, let alone in combination with urea, as in the present invention.

Regarding the rejection of claims 43-45, Hoppe et al. discloses the use of topical formulations that include ubiquinones for the treatment of senile xerosis and/or exogenous aging of the skin. The Office Action concedes that Hoppe et al. does not disclose the use of urea with coenzyme Q10. Raab discloses that urea is a known moisturizer and has long been

used in the art of personal care formulation. Neither Hoppe et al. nor Raab, alone or in combination, teaches or suggests a composition comprising *a combination* of urea and coenzyme Q10 *in any ratio*, much less teach or suggest a ratio of from about 6:1 to about 10:1 (wt./wt.), as recited in the claims.

Even if, for the sake of argument, one of ordinary skill in the art would have been motivated to combine the references as proposed by the Office, which Applicants maintain is not the case, one would not arrive at the present invention. The primary reference, Riley et al. simply does not disclose a composition that contains both urea and coenzyme Q10. Since the combination of the disclosure of Riley et al. with the disclosures of Fänger et al. and/or Hoppe et al. and Raab does not recite all of the elements of the pending claims, it cannot be said that the combination of these references render the present invention obvious.

The Examiner states “generally differences in concentration will not support the patentability...unless there is evidence indicating that such concentration is critical” (see Office Action, page 3). As discussed in the specification and previous responses, the present invention, i.e., a composition comprising urea and coenzyme Q10 in a ratio from about 6:1 to about 10:1 (wt./wt.), is based on surprising synergistic results that are novel and unobvious in view of the teachings in the art.

As demonstrated in Example 1, and as can be seen graphically in Figure 1, Applicants have discovered that the combination of coenzyme Q10 and urea absorbs more water from the environment than would be expected, and more than either of urea or coenzyme Q10 if used alone. In addition, Example 2 of the present application shows that the combination of coenzyme Q10 and urea synergistically results in greater immediate skin moisturizing properties than urea alone and coenzyme Q10 alone. Specifically, the data in Example 2 establishes that the synergistic combination of coenzyme Q10 and urea results in an 11% maximum increase in skin moisturization over 1 hour, while urea alone and coenzyme Q10 alone exhibit an increase in skin moisturization of only 6.5% and 3.4%, respectively. Furthermore, Example 3 establishes the synergistic benefit of the combination of coenzyme Q10 and urea with respect to cumulative skin moisturization. Notably, the skin moisturization effect exhibited by the coenzyme Q10/urea blend tested in Example 3 is significantly greater than would be expected based on the individual moisturizations scores for coenzyme Q10 alone and urea alone.

Therefore, the present invention is directed towards a composition containing a ratio of urea to coenzyme Q10 in a weight ratio that provides synergistic results. Compositions comprising the combination of urea and coenzyme Q10 are not taught or suggested in the art. Moreover, the specific weight ratios—which provide synergistic results—are not taught or

In re Appln. of Ghosh et al.  
Application No. 09/851,882



suggested in the art. The closest art the Examiner could find (Riley et al.) does not disclose a composition even related to the present invention. In view of the foregoing, the present invention is patentable over the cited references. Accordingly, the obviousness rejections should be withdrawn and the application allowed.

*Conclusion*

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Salim A. Hasan".

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Date: June 13, 2003